

AMENDMENTS TO THE CLAIMS

Claims pending

- At time of the Action: Claims 1-34.
- After this Response: Claims 35-82.

Canceled or Withdrawn claims: 1-34.

Amended claims: None.

New claims: 35-82.

1-34. (Canceled).

35. (New) A method comprising:

receiving a first annotation object corresponding to a first multimedia content;
creating a first annotation entry comprising:

a first annotation identifier corresponding to the first annotation object;

a first media characteristic for synchronizing the first annotation object
with a first portion of the first multimedia content; and

a first set of version identifiers corresponding to a plurality of versions of
the first multimedia content; and

storing the first annotation entry.

36. (New) The method according to Claim 35, further comprising:

receiving a second annotation object corresponding to the first multimedia
content;

creating a second annotation entry comprising:

a second annotation identifier corresponding to the second annotation
object;

1 a second media characteristic for synchronizing the second annotation
2 object with a second portion of the first multimedia content; and
3 the first set of version identifiers corresponding to the plurality of version
4 of the first streaming multimedia content; and
5 storing the second annotation entry.

6 37. (New) The method according to Claim 36, wherein the first annotation
7 entry and the second annotation entry are stored in a first annotation collection of a
8 metadata store.

9 38. (New) The method according to Claim 37, further comprising:
10 receiving a third annotation object corresponding to a second multimedia
11 content;
12 creating a third annotation entry comprising:
13 a third annotation identifier corresponding to the third annotation object;
14 a third media characteristic for synchronizing the third annotation object
15 with a first portion of the second multimedia content; and
16 a second set of version identifiers corresponding to a plurality of versions
17 of the second multimedia content; and
18 storing the third annotation entry.

19 39. (New) The method according to Claim 38, wherein the third annotation
20 entry is stored in a second annotation collection of the metadata store.

21 40. (New) The method according to Claim 35, further comprising:
22 receiving a second annotation object corresponding to a second multimedia
23 content;
24 generating a second annotation entry comprising:
25 a second annotation identifier corresponding to the second annotation
object;

1 a second media characteristic for synchronizing the second annotation
2 object with a first portion of the second multimedia content; and
3 a second set of version identifiers corresponding to a plurality of version of
4 the second multimedia content; and
5 storing the second annotation entry.

6 41. (New) The method according to Claim 40, wherein:
7 the first annotation entry is stored in a first annotation collection of a metadata
8 store; and
9 the second annotation entry is stored in a second annotation collection of the
10 metadata store.

11 42. (New) The method according to Claim 35, wherein the first annotation
12 entry further comprises one or more items of information selected from a group
13 consisting of an author, a creation time, a title, a related annotation identifier, an
14 annotation set identifier and a user-defined property.

15 43. (New) The method according to Claim 35, wherein the first media
16 characteristic comprises temporal position information.

17 44. (New) The method according to Claim 35, wherein the first media
18 characteristic comprises a segment identifier of a segment in the first multimedia
19 content.

20 45. (New) The method according to Claim 35, wherein the first media
21 characteristic comprises an event identifier of an event in the first multimedia content.

22 46. (New) The method according to Claim 35, wherein the first media
23 characteristic comprises a begin time and an end time defining the portion of the first
24 multimedia content to which the annotation object is synchronized.
25

1 47. (New) The method according to Claim 35, wherein the first multimedia
2 content comprises a streaming multimedia presentation.

3
4 48. (New) The method according to Claim 35, wherein the multimedia
5 content comprises a plurality of media objects that share a common timeline.

6
7 49. (New) The method according to Claim 48, wherein a given one of the
8 plurality of media objects comprises audio data, video data, text data, animation data
9 or graphical data.

10 50. (New) One or more computer-readable medium containing a plurality of
11 instructions which when executed cause a system to perform acts comprising:
12 receiving a new annotation object;
13 determining an annotation identifier of the new annotation object;
14 determining a first set of version identifiers identifying each version of a first
15 multimedia content to which the annotation object corresponds;
16 determining a first media characteristic that associates the new annotation
17 object to a portion of a version of the first multimedia content;
18 storing the annotation identifier, the first set of version identifiers and the first
19 media characteristic as a first annotation entry in a metadata store; and
20 storing the new annotation object in a content store.

21 51. (New) The computer-readable medium according to Claim 50, wherein
22 determining the first media characteristic that associates the new annotation object to
23 a portion of the first multimedia content comprises:

24 determining a target media characteristic that associates the new annotation
25 object to a portion of a target version of the first multimedia content; and
 converting the target media characteristic to a base media characteristic.

1 52. (New) The computer-readable medium according to Claim 51, wherein
2 the target media characteristic is converted to the base media characteristic as a
3 function of a temporal parameter of the target version of the first multimedia content
4 and a temporal parameter of a base version of the first multimedia content.

5 53. (New) The computer-readable medium according to Claim 52, wherein
6 the base version of the first multimedia content comprises a particular combination of
7 a plurality of individual media streams.

8 54. (New) The computer-readable medium according to Claim 52, wherein
9 the base version of the first multimedia content is the originally created version of the
10 multimedia content.

11 55. (New) The computer-readable medium according to Claim 52, wherein
12 the target version of the first multimedia content comprises a given combination of a
13 plurality of individual media streams that creation of the new annotation object is
14 based upon.

15 56. (New) The computer-readable medium according to Claim 50, wherein
16 each version identifier of the first set of version identifiers is a Uniform Resource
17 Locator (URL).

18 57. (New) The computer-readable medium according to Claim 50, further
19 comprising:

20 determining a second set of version identifiers identifying each version of a
21 second multimedia content to which the annotation object corresponds;

22 determining a second media characteristic that associates the new annotation
23 object to a portion of a version of the second multimedia content; and

24 storing the annotation identifier, the second set of version identifiers and the
25 second media characteristic as a second annotation entry in the metadata store.

1 58. (New) The computer-readable medium according to Claim 50, further
2 comprising:
3 determining a version identifier of a second multimedia content being
4 presented to a user;
5 identifying each of a plurality of annotation entries in the metadata store that
6 contain the received version identifier;
7 retrieving each of a plurality of annotation objects respectively corresponding
8 to each of the identified plurality of annotation entries from the content store; and
9 rendering the plurality of annotation objects concurrently with the second
10 multimedia content, wherein each of the plurality of annotation objects is presented
11 proximate a respective media characteristic identified in the corresponding one of the
12 identified plurality of annotation entries.

13 59. (New) The computer-readable medium according to Claim 58, wherein
14 the first annotation entry further includes one or more determined items of
15 information selected from a group consisting of an author, a creation time, a title, a
16 related annotation identifier, an annotation set identifier and a user-defined property.

17 60. (New) The computer-readable medium according to Claim 59, further
18 comprising ordering the rendering of a set of the plurality of annotation objects as a
19 function of the related annotation identifier contained in each of the identified
20 plurality of annotation entries that contain substantially the same media characteristic
21 identifier.

22 61. (New) The computer-readable medium according to Claim 59, further
23 comprising grouping the rendering of a set of the plurality of annotation objects as a
24 function of the annotation set identifier contained in each of the identified plurality of
25 annotation entries.

1 62. (New) The computer-readable medium according to Claim 59, further
2 comprising selectively rendering the plurality of annotation objects as a function of
3 the creation time contained in each of the identified plurality of annotation entries.

4 63. (New) One or more computer-readable medium containing a plurality of
5 instructions which when executed cause a system to perform acts comprising:
6 receiving an indication of a Real-time Transport Protocol (RTP) address of a
7 current multimedia content being presented to a user;
8 identifying one of a plurality of annotation collections having an RTP address
9 corresponding to the received RTP address;
10 identifying each of a plurality of annotation entries of the one of the plurality
11 of annotation collections;
12 determining a current media characteristic of the current multimedia content;
13 converting the current media characteristic of the current multimedia content
14 to a base media characteristic; and
15 rendering each of a plurality of annotation objects corresponding to an
16 annotation identifier contained in each of the identified plurality of annotation entries,
17 wherein each annotation object is rendered concurrently with the current multimedia
18 content proximate the respective base media characteristic identified in the respective
19 one of the plurality of annotation entries.

20 64. (New) The computer-readable medium according to Claim 63, further
21 comprising:
22 receiving a first annotation object corresponding to a first multimedia content;
23 creating a first annotation entry comprising:
24 a first annotation identifier corresponding to the first annotation object;
25 a first media characteristic for synchronizing the first annotation object
 with a first portion of the first multimedia content; and
 a first set of version identifiers corresponding to a plurality of versions of
 the first multimedia content;

1 storing the first annotation entry; and
2 storing the first annotation object.

3 65. (New) The computer-readable medium according to Claim 64, further
4 comprising:

5 receiving a second annotation object corresponding to the first multimedia
6 content;

7 creating a second annotation entry comprising:

8 a second annotation identifier corresponding to the second annotation
9 object;

10 a second media characteristic for synchronizing the second annotation
11 object with a second portion of the first multimedia content; and

12 the first set of version identifiers corresponding to the plurality of version
13 of the first streaming multimedia content;

14 storing the second annotation entry; and

15 storing the second annotation object.

16 66. (New) The computer-readable medium according to Claim 65, wherein
17 the first annotation entry and the second annotation entry are stored in a first
18 annotation collection.

19 67. (New) The computer-readable medium according to Claim 66, further
20 comprising:

21 receiving a third annotation object corresponding to a second multimedia
22 content;

23 creating a third annotation entry comprising:

24 a third annotation identifier corresponding to the third annotation object;

25 a third media characteristic for synchronizing the third annotation object
with a first portion of the second multimedia content; and

1 a second set of version identifiers corresponding to a plurality of versions
2 of the second multimedia content;
3 storing the third annotation entry; and
4 storing the third annotation object.

5 68. (New) The computer-readable medium according to Claim 67, wherein
6 the third annotation entry is stored in a second annotation collection.

7 69. (New) The computer-readable medium according to Claim 64, further
8 comprising:

9 receiving a second annotation object corresponding to a second multimedia
10 content;

11 generating a second annotation entry comprising:

12 a second annotation identifier corresponding to the second annotation
13 object;

14 a second media characteristic for synchronizing the second annotation
15 object with a first portion of the second multimedia content; and

16 a second set of version identifiers corresponding to a plurality of version of
17 the second multimedia content;

18 storing the second annotation entry; and

19 storing the second annotation object.

20 70. (New) The computer-readable medium according to Claim 69, wherein:
21 the first annotation entry is stored in a first annotation collection; and
22 the second annotation entry is stored in a second annotation collection.

23 71. (New) A system comprising:

24 an annotation database to:

25 maintain a plurality of annotation objects; and

1 maintain a plurality of annotation entries, wherein each annotation entry
2 corresponds to an annotation object and includes (1) an annotation
3 identifier, (2) a media characteristic correlating the annotation object
4 with a particular segment of a multimedia presentation, and (3) a
5 version identifier of each of a plurality of versions of the multimedia
6 presentation; and

7 an annotation server, coupled to the annotation database, to:

8 receive a new annotation object corresponding to a particular multimedia
9 presentation;

10 create a new annotation entry corresponding to the new annotation object;
11 and

12 store the new annotation object and the corresponding new annotation
13 entry in the annotation database.

14 72. (New) The system as recited in Claim 71, further comprising a browser,
15 communicatively coupled to the annotation server, to author the new annotation
16 object.

17 73. (New) The system as recited in Claim 71, wherein the annotation server is
18 configured to delete an identified annotation object and a corresponding one of the
19 plurality of annotation entries.

20 74. (New) The system as recited in Claim 71, wherein the annotation serve is
21 configured to edit an identified annotation object and a corresponding one of the
22 plurality of annotation entries.

23 75. (New) The system as recited in Claim 71, wherein the annotation server is
24 configured to edit one of the plurality of annotation entries corresponding to an
25 identified annotation object.

1 76. (New) The system as recited in Claim 71, wherein the annotation server is
2 further configured to:

3 determine provisioning of a specific version of a specific multimedia
4 presentation; and

5 provision a specific annotation object synchronized with a corresponding
6 media characteristic of the particular multimedia presentation as a
7 function of one of the plurality of annotation metadata sets
8 corresponding to the specific annotation object.

9 77. (New) The system as recited in Claim 76, further comprising a multimedia
10 server, coupled to the annotation server, to:

11 maintain a plurality of multimedia presentations;

12 receive a request for the specific version of the specific multimedia
13 presentation; and

14 provision the specific version of the specific multimedia presentation.

15 78. (New) The system as recited in Claim 77, further comprising a browser,
16 communicatively coupled to the media server and the annotation server, to:

17 generate the request for the specific multimedia presentation; and

18 display the specific version of the specific multimedia presentation and the
19 specific annotation object.

20 79. (New) The system as recited in Claim 71, wherein each annotation entry
21 further includes one or more fields for storing information selected from a group
22 consisting of an author, a creation time, a tile, a related annotation identifier, an
23 annotation set identifier and a user defined property.

24 80. (New) A system comprising:

25 an annotation database to:

 maintain a plurality of annotation objects; and

1 maintain a plurality of annotation entries, wherein one or more of the
2 annotation entries, corresponding to an annotation object, each includes
3 (1) an annotation identifier, (2) a media characteristic correlating the
4 annotation object with a particular segment of a multimedia
5 presentation, and (3) a version identifier of each of a plurality of
6 versions of the multimedia presentation; and
7 an annotation server, coupled to the annotation database, to:
8 determine provisioning of a particular version of a particular multimedia
9 presentation; and
10 provision a particular annotation object synchronized with a corresponding
11 media characteristic of the particular multimedia presentation as a
12 function of one of the plurality of annotation entries corresponding to
13 the particular annotation object.

14 81. (New) The system as recited in Claim 80, further comprising a multimedia
15 server, coupled to the annotation server, to:
16 maintain a plurality of multimedia presentations;
17 receive a request for the particular version of the particular multimedia
18 presentation; and
19 provision the particular version of the particular multimedia presentation.

20 82. (New) The system as recited in Claim 81, further comprising a browser,
21 communicatively coupled to the media server and the annotation server, to:
22 generate the request for the particular multimedia presentation; and
23 display the particular version of the particular multimedia presentation and the
24 particular annotation object.
25